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## Integrated Flame Scanner with Internal Flame Relay

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### **Addendum to CU-95 reduced temperature operation**

The Fireeye InSight I flame scanners (e.g., 95DSS2) are microprocessor-based flame scanners utilizing dual solid-state infrared (IR) and ultraviolet (UV) sensors.

Fireeye's engineering department performed tests confirming the ability of our model "InSight I" flame scanner to perform at reduced temperatures. Testing was carried out on Fireeye InSight I model 95DSS2-1. These results apply to all InSight I models and versions of the product.

The unit was placed in a cold-box set for  $-50^{\circ}\text{C}$  and left overnight with no power applied to the scanner. The following morning the scanner was powered up and its display read the internal temperature as  $-50^{\circ}\text{C}$ . A flame was simulated outside of the cold-box through an eight-inch sight-tube.

Power was applied to the scanner, and after 20 minutes the scanner inside temperature had risen to  $-39^{\circ}\text{C}$ , although the ambient remained at  $-50^{\circ}\text{C}$  throughout (internal heat rise). Upon reaching an internal temperature of  $-39^{\circ}\text{C}$ , power was cycled to the scanner, and it operated normally.

### **Conclusion:**

The InSight I scanners will properly operate from a cold start condition of  $-50^{\circ}\text{C}$  if power is applied to the InSight scanner for a minimum of 20 minutes and power is cycled.